

## ANALYSIS OF INDUSTRIAL EFFLUENT FROM SOME FACTORIES IN TEMA

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### ABSTRACT

This research work analysed the quality of some important physico-chemical parameters of industrial effluents collected from two soap factories (A and B) in the Tema industrial area. In the study,  $\text{PO}_4^-$ ,  $\text{NH}_3$ , BOD, COD, TSS and turbidity for both factories were high compared to the EPA standards. Measures of  $\text{NO}_3^-$ , total hardness, calcium, and chloride, for both factories were below the EPA standard. Alkalinity value for factory A was below the EPA standard while that for factory B was higher. pH value for factory A was within the pH range for EPA while that of factory B was higher. TDS and conductivity for factory A were below the recommended EPA standard while that of factory B was higher. Due to the high amount of  $\text{PO}_4^-$ ,  $\text{NH}_3$ , and turbidity, eutrophication could occur in the receiving water, thereby affecting aquatic life. The high BOD, COD and TSS contribute to the decrease in oxygen supply in the receiving water which indicates high pollution by organic pollutants. The high alkalinity, TDS, conductivity and pH could contribute to the deformity and death of fishes in the receiving water from especially Factory A. Effluents from both factories were highly polluted in many respects and so EPA audits must be intensified to prevent pollution of water bodies in Ghana.

**Keywords:** BOD, COD, Industrial Effluent, Physico-Chemical, TDS, TSS, Water Pollution.